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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,151	04/01/2004	Pascal Scaramuzzino	AD7015USNA	9032

23906 7590 12/27/2005

E I DU PONT DE NEMOURS AND COMPANY  
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WILMINGTON, DE 19805

EXAMINER
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RONESI, VICKEY M

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/816,151	<b>Applicant(s)</b> SCARAMUZZINO, PASCAL	
	<b>Examiner</b> Vickey Ronesi	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. All outstanding rejections are withdrawn in light of applicant's amendment filed 10/4/2005.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The new grounds of rejection set forth below are necessitated by applicant's amendment filed 10/4/2005. In particular, claim has been amended so that the molecular weight limitation of the non-polyacetal resin is deleted. This combination of limitations was not present in the original claims. Thus, the following action is properly made final.

### *Election/Restrictions*

4. Applicant's election without traverse of claims 1-11 in the reply filed on 10/4/2005 is acknowledged.
5. Claims 12-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/4/2005.

### *Claim Rejections - 35 USC § 103*

6. Claims 1-5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al (US 4,464,435).

Hattori et al discloses a polyacetal resin composition comprising 100 parts by weight (pbw) of a polyacetal resin; 2-35 pbw of a Group II metal salt (i.e., acid-soluble particles) having

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an average particle size ranging from 0.1-4.0 microns such as calcium carbonate (col. 2, line 66 to col. 3, line 38); 0.01-20 pbw of an additional polymer (col. 3, lines 57-68; col. 5, lines 15-24)—which converts to about 2 to about 35 wt % of Group II metal salt based on the amount of polymer and up to about 16 wt % of additional polymer based on the amount of polymer. Given that Hattori et al's composition is melt-processed and injection molded into an article (col. 5, lines 37-51; col. 8, line 60) like presently disclosed on page 15, lines 22-31 and page 16, lines 7-10 of the present specification, it is intrinsic that said article also contains acid-soluble particle at its surface.

While Hattori et al discloses only the average particle size of acid-soluble particles and not the size distribution of the particles (i.e., that at least 98 % of the particles are in the size range of 0.1-5 microns), it teaches that the particle size is critical in obtaining suitable specular character, adhesion, and heat stability (col. 3, lines 20-25).

Given that Hattori et al teaches the importance of particle size and further given that it teaches a range of average particle size of 0.1-4 microns which falls within the presently claimed range, it would have been obvious to one of ordinary skill in the art to utilize a suitable particle distribution, including that presently claimed, and thereby arrive at the presently cited claims.

7. Claims 6-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al (US 4,464,435) in view of Gelorme et al (US 4,615,763).

The discussion with respect to Hattori et al in paragraph 6 above is incorporated here by reference.

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Hattori et al does not disclose the use of acid-insoluble inorganic particles, however, it is open to the addition of various additives (col. 5, lines 32-36).

Gelorme et al, like Hattori, discloses a way of roughening surface of a substrate in preparation for etching. In Gelorme et al's method, 1-10 wt % of inorganic particulate such as fused silica (e.g., Cabosil) which have a particle size of from about 0.002 to about 10 microns is added to a resinous material (col. 3, lines 54-65; col. 4, lines 21-29) and then, upon etching, the resinous material is removed while the inorganic particulate remains and is left exposed (col. 3, lines 12-22).

Given that Hattori et al and Gelorme et al both disclose methods of roughening surfaces, it would have been obvious to one of ordinary skill in the art to combine the features of both (i.e., the acid-soluble particles of Hattori et al and the acid-insoluble particles of Gelorme et al) that accomplish the same end and thereby arrive at the presently claimed invention. Case law holds that "it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

By combining Hattori et al and Gelorme et al and based on the amounts taught by each, the acid-insoluble particles of Gelorme et al are present in an amount from 5/1 to 1/35 of the weight of the acid-soluble particles of Hattori et al.

In light of the above, it would have been obvious to one of ordinary skill in the art to combine the compositions of Hattori et al and Gelorme et al where the particle diameters and

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relative amounts are as taught by both references which would intrinsically give an article with the acid-insoluble particles anchoring around the surface of the acid-insoluble particles since they are processed in the same manner as presently disclosed (page 15, lines 22-31) and thereby arrive at the presently cited claims.

### *Response to Arguments*

8. Applicant's arguments filed 10/4/2005 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that there is no indication in Hattori et al what the size distribution of the metal salt particles can be; (B) that neither Hattori et al nor Gelorme et al teaches that improved surface appearance is had by using the presently claimed size distribution or mixture of both acid-soluble and acid-insoluble particles; and (C) that Gelorme et al teaches the use of both acid-soluble and acid-insoluble particles;

With respect to argument (A), as discussed above, while Hattori et al does not explicitly disclose the size distribution, it clearly suggests that the particle size is critical in obtaining desirable properties. Therefore, it would have been obvious to one of ordinary skill in the art to utilize Hattori et al's teachings regarding particle size and thus use appropriate particle size distributions, including those presently claimed.

With respect to argument (B), it is noted that the feature upon which applicant relies (i.e., improved surface appearance) is not recited in the rejected claims. Case law holds that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Additionally, Hattori et al teaches adequate appearance with no cracking of plated product (see

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Table 1 bridging cols. 11 and 12). Furthermore, improved surface appearance is intrinsically had by composition of Hattori et al alone or combined with Gelorme et al given that they adequately disclose the presently claimed composition which intrinsically has the improved surface appearance properties.

With respect to argument (C), Gelorme et al is utilized for its teachings regarding acid-insoluble particles as useful surface-roughening agents. While it also teaches the use of acid-soluble particles (e.g., calcium carbonate), its preferred inorganic particulate is silica which is acid-insoluble.

### *Conclusion*

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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*Contact Information*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/19/2005

vr



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